



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,778	04/20/2001	Anton Blaakmeer	702-010062	7921
28289	7590	12/06/2005	EXAMINER	
THE WEBB LAW FIRM, P.C. 700 KOPPERS BUILDING 436 SEVENTH AVENUE PITTSBURGH, PA 15219			NGUYEN, SON T	
			ART UNIT	PAPER NUMBER
			3643	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/762,778	BLAAKMEER ET AL.	
	Examiner	Art Unit	
	Son T. Nguyen	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12,16 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12,16 and 18-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 12,16,19-22,24-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Clausen (WO 91/08662) in view of Hattori et al. (5127187).

For claim 12, Clausen teaches a mineral wool plant substrate comprising a coherent matrix of mineral wool, a cured binder, and a quantity of an ion-exchange agent such as lignite, wherein the coherent matrix is formed by collecting a layer of mineral wool fibers that is cured by the binder, said cured binder fixing the fibers to one another so that they are substantially not displaceable relative to one another. However, Clausen is silent about the ion-exchange agent being zeolite and various quantity of ion-exchange capacity and volume.

Hattori et al. teach zeolite being a well known ion exchange agent. It would have been an obvious substitution of functional equivalent to substitute the lignite of Clausen with the zeolite of Hattori et al., since both types of ion exchange agent would perform the same function to retain water and does not require disinfection before use, thus, providing a stable structure for the substrate.

For claim 16, Clausen as modified by Hattori et al. is silent about the ion-exchange agent has an average pore size of less than 25 μm . It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ion-exchange agent has an average pore size of less than 25 μm in the substrate of Clausen as modified by Hattori et

Art Unit: 3643

al., since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

For claim 19, Clausen as modified by Hattori et al. (emphasis on Clausen) teaches clay (page 4, line 25). However, Clausen as modified by Hattori et al. is silent about up to about 20 volume % of clay. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have up to about 20 volume % of clay in the substrate of Clausen as modified by Hattori et al., since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

For claims 20-21, Clausen as modified by Hattori et al. (emphasis on Clausen) teaches the substrate used as a growing block or a growing mat (page 5).

For claim 24, Clausen as modified by Hattori et al. teaches zeolite, thus, zeolite itself has a stable zeolite cage-like structure.

For claims 25-26, Clausen as modified by Hattori et al. is silent about the quantity of the ion exchange. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ about 30 meq/100g or 40 meq/100g dry weight of the ion exchange agent in the substrate of Clausen as modified by Hattori et al., since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

3. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Clausen as modified by Hattori et al. as applied to claim 12 above, and further in view of De Groot et al. (WO 97/16961).

Clausen as modified by Hattori et al. is silent about further comprising an organic substance such as sphagnum and peat, wherein the substance substitutes the wool for up to 20 volume %.

De Groot et al. teach similar mineral wool substrate as that of Clausen as modified by Hattori et al., which substrate further comprising an organic substance such as sphagnum and peat. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further employ an organic substance such as sphagnum and peat as taught by De Groot et al. in the substrate of Clausen as modified by Hattori et al. in order to control pH level due to the buffering property of the organic substance (page 2, line 25 of De Groot).

Clausen as modified by Hattori et al. and De Groot does not state specific amount or quantity of organic substance to be used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use up to 20 volume % of the organic substance in the substrate of Clausen as modified by Hattori et al. and De Groot, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

4. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen et al. (GB1336426) in view of Clausen (as above).

Jorgensen et al. disclose a mineral wool plant substrate comprising a coherent matrix of mineral wool (page 1, line 9), a cured binder (page 2, lines 71-72 and page 3, lines 5-10)), wherein the coherent matrix is formed by collecting a layer of mineral wool fibers that is cured by the binder (page 2, lines 71-72, page 3, lines 5-10 and 52-55), said cured binder fixing the fibers to one another so that they are substantially not displaceable relative to one another (page 2, lines 117-125). However, Jorgensen et al. are silent about a pre-determined amount of

Art Unit: 3643

clay, a pre-determined amount of an organic substance, and quantity of the clay and organic substance for up to 20 volume %.

As mentioned above, Clausen discloses a mineral wool plant substrate comprising mineral wool, binder, a pre-determined amount of clay and a pre-determined amount of organic substance (page 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a pre-determined amount of clay and a pre-determined amount of organic substance as taught by Clausen in the substrate of Jorgensen et al. in order to control pH level due to the buffering property of the organic substance and increase water retention.

In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use up to 20 volume % of the organic substance and clay in the substrate of Jorgensen et al. as modified by Clausen, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

5. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen et al. as modified by Clausen as applied to claim 22 above, and further in view of Schnuda (5368626).

Jorgensen et al. as modified by Clausen are silent about peat. Schnuda teaches a growth medium or substrate in which he employs peat together with mineral wool in the medium to provide a higher water retention medium (col. 1, lines 62-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ peat as taught by Schnuda in the substrate of Jorgensen et al. as modified by Clausen in order to increase water retention in the substrate.

Response to Arguments

6. Applicant's arguments with respect to claims 12,16,18-21,24-26 have been considered but are moot in view of the new ground(s) of rejection. Only claims 22-23 are maintained as in the previous action; however, there is no argument against these claims since the argument pertains to the zeolite, which claims 22-23 do not pertain to zeolite.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

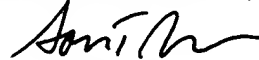
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3643

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Son T. Nguyen
Primary Examiner
Art Unit 3643

stn